

VERDAD RESOURCES

WATTENBERG FIELD

8N-60W-11 SONIC STAR 1101 PAD

SONIC STAR 1101-16H

Wellbore #1

Design #1

Anticollision Summary Report

20 August, 2020

HP

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well SONIC STAR 1101-16H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4902.00usft (RIG)
Reference Site:	8N-60W-11 SONIC STAR 1101 PAD	MD Reference:	RKB = 20' @ 4902.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	SONIC STAR 1101-16H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,500.00usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Added to Error Values

Survey Tool Program	Date	8/20/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	1,700.00	Design #1 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination
1,700.00	19,015.32	Design #1 (Wellbore #1)	ISCWSA MWD	Fixed:v2:standard declination

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
8N-60W-11 SONIC STAR 1101 PAD						
SONIC STAR 1101-01H - Wellbore #1 - Design #3	250.00	246.00	225.08	217.48	29.598	CC, ES
SONIC STAR 1101-01H - Wellbore #1 - Design #3	1,700.00	1,636.24	389.01	371.65	22.406	SF
SONIC STAR 1101-02H - Wellbore #1 - Design #1	250.00	247.00	210.07	202.47	27.623	CC, ES
SONIC STAR 1101-02H - Wellbore #1 - Design #1	1,700.00	1,650.12	340.35	322.15	18.696	SF
SONIC STAR 1101-03H - Wellbore #1 - Design #1	250.00	247.00	195.06	187.45	25.649	CC, ES
SONIC STAR 1101-03H - Wellbore #1 - Design #1	1,700.00	1,659.97	298.55	279.49	15.668	SF
SONIC STAR 1101-04H - Wellbore #1 - Design #1	250.00	247.00	180.05	172.44	23.675	CC, ES
SONIC STAR 1101-04H - Wellbore #1 - Design #1	1,800.00	1,763.86	276.83	255.53	12.995	SF
SONIC STAR 1101-05H - Wellbore #1 - Design #1	250.00	247.00	165.07	157.47	21.706	CC, ES
SONIC STAR 1101-05H - Wellbore #1 - Design #1	1,800.00	1,770.71	242.18	219.98	10.910	SF
SONIC STAR 1101-06H - Wellbore #1 - Design #1	250.00	248.00	150.06	142.46	19.731	CC, ES
SONIC STAR 1101-06H - Wellbore #1 - Design #1	2,000.00	1,972.15	232.38	207.04	9.171	SF
SONIC STAR 1101-07H - Wellbore #1 - Design #1	250.00	248.00	135.04	127.44	17.756	CC, ES
SONIC STAR 1101-07H - Wellbore #1 - Design #1	2,100.00	2,075.33	210.37	182.87	7.649	SF
SONIC STAR 1101-08H - Wellbore #1 - Design #1	250.00	249.00	120.03	112.43	15.781	CC
SONIC STAR 1101-08H - Wellbore #1 - Design #1	300.00	298.49	120.07	112.42	15.694	ES
SONIC STAR 1101-08H - Wellbore #1 - Design #1	2,200.00	2,179.72	186.70	156.30	6.141	SF
SONIC STAR 1101-09H - Wellbore #1 - Design #1	250.00	249.00	105.02	97.41	13.807	CC
SONIC STAR 1101-09H - Wellbore #1 - Design #1	300.00	298.59	105.05	97.40	13.731	ES
SONIC STAR 1101-09H - Wellbore #1 - Design #1	2,300.00	2,282.65	164.25	130.94	4.930	SF
SONIC STAR 1101-10H - Wellbore #1 - Design #1	250.00	249.00	90.04	82.44	11.838	CC
SONIC STAR 1101-10H - Wellbore #1 - Design #1	300.00	298.68	90.07	82.41	11.772	ES
SONIC STAR 1101-10H - Wellbore #1 - Design #1	2,400.00	2,385.05	142.81	106.72	3.958	SF
SONIC STAR 1101-11H - Wellbore #1 - Design #1	250.00	250.00	75.03	67.42	9.864	CC
SONIC STAR 1101-11H - Wellbore #1 - Design #1	300.00	299.75	75.05	67.40	9.809	ES
SONIC STAR 1101-11H - Wellbore #1 - Design #1	2,500.00	2,488.80	118.64	78.66	2.968	SF
SONIC STAR 1101-12H - Wellbore #1 - Design #1	250.00	250.00	60.02	52.41	7.890	CC
SONIC STAR 1101-12H - Wellbore #1 - Design #1	2,400.00	2,392.68	87.64	49.56	2.301	ES
SONIC STAR 1101-12H - Wellbore #1 - Design #1	2,500.00	2,492.12	90.95	49.89	2.215	SF
SONIC STAR 1101-13H - Wellbore #1 - Design #1	250.00	250.00	45.00	37.40	5.916	CC
SONIC STAR 1101-13H - Wellbore #1 - Design #1	2,500.00	2,494.63	66.07	24.41	1.586	ES
SONIC STAR 1101-13H - Wellbore #1 - Design #1	2,608.00	2,602.10	69.26	24.41	1.544	SF
SONIC STAR 1101-14H - Wellbore #1 - Design #1	250.00	250.00	29.99	22.38	3.943	CC
SONIC STAR 1101-14H - Wellbore #1 - Design #1	2,608.00	2,604.38	44.38	-0.80	0.982	Level 1, ES, SF
SONIC STAR 1101-15H - Wellbore #1 - Design #1	250.00	250.00	15.01	7.41	1.974	CC
SONIC STAR 1101-15H - Wellbore #1 - Design #1	2,700.00	2,698.29	22.53	-26.59	0.459	Level 1, SF

HP

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Reference Site:	8N-60W-11 SONIC STAR 1101 PAD	MD Reference:	RKB = 20' @ 4902.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	SONIC STAR 1101-16H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary							
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
Offset Well - Wellbore - Design							
8N-60W-11 SONIC STAR 1101 PAD							
SONIC STAR 1101-15H - Wellbore #1 - Design #1	19,011.55	18,794.12	310.19	-175.84	0.638	Level 1, ES	
8N-60W-12 Offsets							
COLORADO NATIONAL BANK #1 - Shell P&A Well - No	13,200.00	6,351.00	376.52	25.61	1.073	Level 2, ES, SF	
COLORADO NATIONAL BANK #1 - Shell P&A Well - No	13,288.61	6,351.00	365.94	30.66	1.091	Level 2, CC	
8N-60W-14 Offsets							
BOOMSLANG FED 8-60 14A-13-18-1 - Bison Planned W	8,073.60	10,914.73	67.85	-231.90	0.226	Level 1, CC	
BOOMSLANG FED 8-60 14A-13-18-1 - Bison Planned W	8,100.00	10,933.20	70.93	-250.59	0.221	Level 1, ES, SF	
BOOMSLANG FED 8-60 14A-13-18-2 - Bison PR Well -	8,196.66	11,146.12	176.10	-23.73	0.881	Level 1, CC	
BOOMSLANG FED 8-60 14A-13-18-2 - Bison PR Well -	8,250.00	11,181.37	182.61	-38.63	0.825	Level 1, ES, SF	
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well -	7,999.15	10,994.26	695.64	472.89	3.123	CC	
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well -	8,050.00	11,024.01	698.72	472.29	3.086	ES	
BOOMSLANG FED 8-60 14A-13-18-3 - Bison PR Well -	8,100.00	11,052.82	707.72	478.24	3.084	SF	
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well -	7,966.77	10,915.00	1,359.05	1,135.70	6.085	CC	
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well -	8,000.00	10,943.08	1,360.12	1,135.11	6.045	ES	
BOOMSLANG FED 8-60 14A-13-18-4 - Bison PR Well -	8,100.00	11,037.38	1,374.97	1,145.42	5.990	SF	
8N-60W-14 SCHNEIDER 1414 PAD							
SCHNEIDER 1414-12H - Wellbore #1 - Design #2						Out of range	
9N-59W-30 PTASNIK FED PAD							
PTASNIK FED 3031 01H - Wellbore #1 - Design #1	19,015.82	11,305.54	664.84	504.21	4.139	CC, ES, SF	
PTASNIK FED 3031 02H - Wellbore #1 - Design #1	19,015.82	11,287.97	710.52	536.99	4.094	CC, ES, SF	
PTASNIK FED 3031 03H - Wellbore #1 - Design #1	19,015.82	11,279.31	783.13	580.31	3.861	CC, ES, SF	
PTASNIK FED 3031 04H - Wellbore #1 - Design #1	19,015.82	11,267.49	877.45	645.30	3.780	CC, ES, SF	
PTASNIK FED 3031 05H - Wellbore #1 - Design #1	19,015.82	11,263.42	986.57	729.09	3.832	CC, ES, SF	
PTASNIK FED 3031 06H - Wellbore #1 - Design #1	19,015.82	11,260.08	1,106.51	829.09	3.988	CC, ES, SF	
PTASNIK FED 3031 07H - Wellbore #1 - Design #2	19,015.82	11,272.22	1,361.66	1,056.82	4.467	CC, ES, SF	
PTASNIK FED 3031 08H - Wellbore #1 - Design #1	19,015.82	11,272.29	1,497.72	1,181.93	4.743	CC, ES, SF	
PTASNIK FED 3031 09H - Wellbore #1 - Design #1						Out of range	
PTASNIK FED 3031 10H - Wellbore #1 - Design #1						Out of range	
PTASNIK FED 3031 11H - Wellbore #1 - Design #1						Out of range	
PTASNIK FED 3031 12H - Wellbore #1 - Design #1						Out of range	
PTASNIK FED 3031 13H - Wellbore #1 - Design #1						Out of range	

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Reference Site:	8N-60W-11 SONIC STAR 1101 PAD	MD Reference:	RKB = 20' @ 4902.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	SONIC STAR 1101-16H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
9N-59W-31 Offsets						
AF 1 - Mallard Planned Well - Planned Surveys	18,751.04	6,539.21	520.22	319.65	2.594	CC
AF 1 - Mallard Planned Well - Planned Surveys	18,800.00	6,535.20	522.49	313.65	2.502	ES
AF 1 - Mallard Planned Well - Planned Surveys	18,900.00	6,526.71	540.86	318.31	2.430	SF
AF 2 - Mallard Planned Well - Planned MWD Surveys	16,682.77	7,422.39	505.14	313.53	2.636	CC
AF 2 - Mallard Planned Well - Planned MWD Surveys	16,800.00	7,400.00	516.74	310.35	2.504	ES, SF
ANDERSEN FED 6-5-1HN - Mallard Planned Well - Plan	19,015.82	6,548.66	382.82	171.34	1.810	CC, ES, SF
ANDERSEN FED 6-5-2HN - Mallard Planned Well - Plan	18,472.76	6,641.70	413.68	204.15	1.974	CC
ANDERSEN FED 6-5-2HN - Mallard Planned Well - Plan	18,500.00	6,641.70	414.57	198.21	1.916	ES
ANDERSEN FED 6-5-2HN - Mallard Planned Well - Plan	18,600.00	6,626.49	432.36	201.09	1.870	SF
ANDERSON FED 6-5-10HN - Mallard Planned Well - Pla	14,346.64	8,600.00	356.23	158.41	1.801	CC
ANDERSON FED 6-5-10HN - Mallard Planned Well - Pla	14,400.00	8,600.00	360.20	147.55	1.694	ES, SF
ANDERSON FED 6-5-3HC - Mallard Planned Well - Plan	18,048.26	6,836.19	292.35	69.63	1.313	Level 3, CC
ANDERSON FED 6-5-3HC - Mallard Planned Well - Plan	18,100.00	6,827.24	296.70	61.00	1.259	Level 3, ES, SF
ANDERSON FED 6-5-4HN - Mallard Planned Well - Plan	17,584.09	6,842.17	516.06	320.93	2.645	CC
ANDERSON FED 6-5-4HN - Mallard Planned Well - Plan	17,700.00	6,825.45	528.45	317.13	2.501	ES, SF
ANDERSON FED 6-5-5HN - Mallard Planned Well - Plan	17,029.71	7,127.09	425.43	224.16	2.114	CC
ANDERSON FED 6-5-5HN - Mallard Planned Well - Plan	17,100.00	7,100.00	431.15	223.92	2.081	ES
ANDERSON FED 6-5-5HN - Mallard Planned Well - Plan	17,200.00	7,100.00	456.23	230.90	2.025	SF
ANDERSON FED 6-5-6HN - Mallard Planned Well - Plan	16,342.86	7,500.00	362.98	153.10	1.729	CC
ANDERSON FED 6-5-6HN - Mallard Planned Well - Plan	16,400.00	7,473.62	365.87	151.98	1.711	ES, SF
ANDERSON FED 6-5-7HN - Mallard Planned Well - Plan	15,776.73	7,756.00	412.79	214.82	2.085	CC
ANDERSON FED 6-5-7HN - Mallard Planned Well - Plan	15,800.00	7,749.64	413.36	212.18	2.055	ES
ANDERSON FED 6-5-7HN - Mallard Planned Well - Plan	15,900.00	7,720.53	428.58	217.10	2.027	SF
ANDERSON FED 6-5-8HC - Mallard Planned Well - Plan	15,365.16	8,045.98	283.23	69.70	1.326	Level 3, CC
ANDERSON FED 6-5-8HC - Mallard Planned Well - Plan	15,400.00	8,033.38	284.98	66.18	1.302	Level 3, ES, SF
ANDERSON FED 6-5-9HN - Mallard Planned Well - Plan	14,891.86	8,244.50	411.05	215.81	2.105	CC
ANDERSON FED 6-5-9HN - Mallard Planned Well - Plan	14,900.00	8,241.99	411.12	214.89	2.095	ES
ANDERSON FED 6-5-9HN - Mallard Planned Well - Plan	15,000.00	8,200.00	422.99	221.05	2.095	SF
RAINBOW-SHULL #1 - Toltex D/A Well - No Surveys						Out of range
SHULL FED 31-32-10HN - Mallard Planned Well - Plann	14,343.15	8,606.49	356.16	156.23	1.781	CC
SHULL FED 31-32-10HN - Mallard Planned Well - Plann	14,400.00	8,595.37	359.97	149.56	1.711	ES, SF
SHULL FED 31-32-1HN - Mallard PR Well - Actual Malla						Out of range
SHULL FED 31-32-2HC - Mallard PR Well - Actual Malla						Out of range
SHULL FED 31-32-3HN - Mallard Planned Well (Now Pro						Out of range
SHULL FED 31-32-4HN - Mallard Planned Well (Now PR						Out of range
SHULL FED 31-32-5HN - Mallard Planned Well - Planne						Out of range
SHULL FED 31-32-6HN - Mallard Planned Well - Planne						Out of range
SHULL FED 31-32-7HN - Mallard Planned Well - Planne						Out of range
SHULL FED 31-32-8HC - Mallard Planned Well - Planne						Out of range
SHULL FED 31-32-9HN - Mallard Planned Well - Planne						Out of range
Shull Fed-9-59-31-0508CDE - Mallard Planned Well - Pla						Out of range
Shull Fed-9-59-31-1209AE - Mallard Planned Well - Plan						Out of range
Shull Fed-9-59-31-2124BE - Mallard Planned Well - Plan						Out of range
Shull Fed-9-59-31-2124CE2 - Mallard Planned Well - Pla						Out of range

HP

Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well SONIC STAR 1101-16H
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Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
9N-60W-25 PEGGY 2501 PAD						
PEGGY 2501-01H - Verdad SI Well - Actual Baker Surve						Out of range
PEGGY 2501-02H - Verdad PR Well - Actual Baker Surv						Out of range
PEGGY 2501-04H - Wellbore #2 - Design #1						Out of range
PEGGY 2501-06H - Wellbore #2 - Design #1						Out of range
PEGGY 2501-08H - Wellbore #2 - Design #1						Out of range
PEGGY 2501-10H - Wellbore #2 - Design #1						Out of range
PEGGY 2501-12H - Wellbore #2 - Design #1						Out of range
PEGGY 2501-14H - Wellbore #2 - Design #1	19,015.82	12,313.10	1,137.29	753.32	2.962	CC, ES, SF
PEGGY 2501-16H - Wellbore #2 - Design #1	19,015.82	12,375.93	553.76	192.84	1.534	CC, ES, SF
9N-60W-35 Offsets Incomplete						
PINTAIL FED 2-11-8HN - Mallard Planned Well - Planned						Out of range
PINTAIL FED 2-11-9HN - Mallard Planned Well - Planned						Out of range
Shull 1-35-9-60 - Carrizo PR Well - Actual Precision Surv						Out of range
Shull 2-35-9-60 - Verdad PR Well - Actual Precision Surv						Out of range
Shull 3-35-9-60 - Verdad PR Well - Actual Precision Surv						Out of range
9N-60W-36 Offsets						
STATE-HUSKY #1 - Bennett D/A Well - No Surveys						Out of range

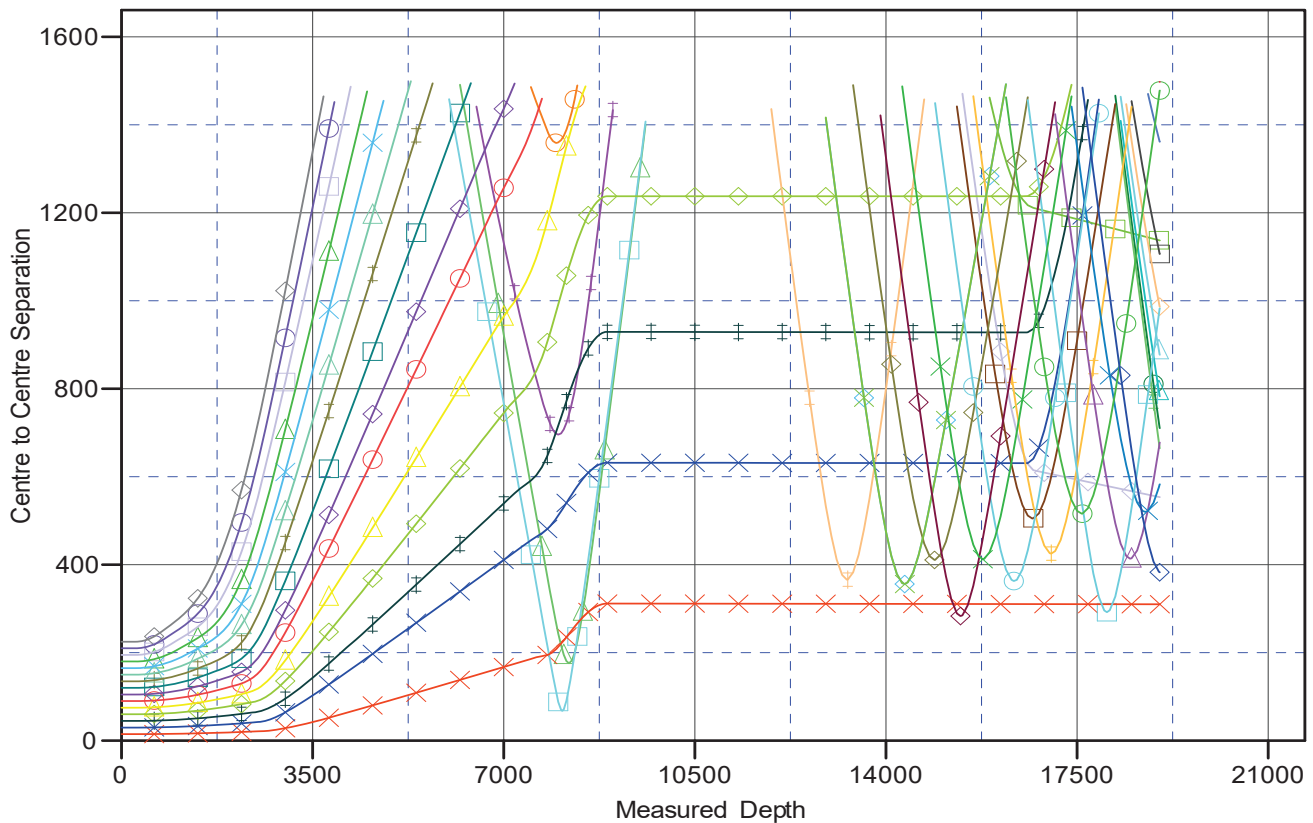
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Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4902.00usft (RIG)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: SONIC STAR 1101-16H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.94°

Ladder Plot



LEGEND

BOOMSLAND FED 8-60 14A-13-182, Bacon PR Well, Actual Baker Surveys V0	SONIC STAR 1101-09H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-5HN, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLAND FED 8-60 14A-13-183, Bacon PR Well, Actual Baker Surveys V0	SONIC STAR 1101-15H, Wellbore #1, Design #1 V0	AF 2, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLAND FED 8-60 14A-13-184, Bacon PR Well, Actual Baker Surveys V0	SONIC STAR 1101-04H, Wellbore #1, Design #1 V0	SHULL FED 31-32-10HN, Mallard Planned Well, Planned Surveys V0
BOOMSLAND FED 8-60 14A-13-181, Bacon Planned Well, Planned Bacon MWD Surveys V0	SONIC STAR 1101-07H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-2HN, Mallard Planned Well, Planned Surveys V0
PEGGY 2501-16H, Wellbore #2, Design #1 V0	SONIC STAR 1101-08H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-9HN, Mallard Planned Well, Planned MWD Surveys V0
COLORADONATIONAL BANK #1, Shell P&A Well, No Surveys V0	SONIC STAR 1101-02H, Wellbore #1, Design #1 V0	AF 1, Mallard Planned Well, Planned Surveys V0
PTASNIK FED 3031 02H, Wellbore #1, Design #1 V0	SONIC STAR 1101-13H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-10HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 05H, Wellbore #1, Design #1 V0	SONIC STAR 1101-06H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-3HC, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 07H, Wellbore #1, Design #2 V0	SONIC STAR 1101-03H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-4HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 08H, Wellbore #1, Design #1 V0	SONIC STAR 1101-10H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-6HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 03H, Wellbore #1, Design #1 V0	SONIC STAR 1101-01H, Wellbore #1, Design #3 V0	ANDERSON FED 6-5-8HC, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 01H, Wellbore #1, Design #1 V0	SONIC STAR 1101-14H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-1HN, Mallard Planned Well, Planned Surveys V0
PTASNIK FED 3031 04H, Wellbore #1, Design #1 V0	SONIC STAR 1101-12H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-7HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 06H, Wellbore #1, Design #1 V0	SONIC STAR 1101-05H, Wellbore #1, Design #1 V0	
	SONIC STAR 1101-11H, Wellbore #1, Design #1 V0	

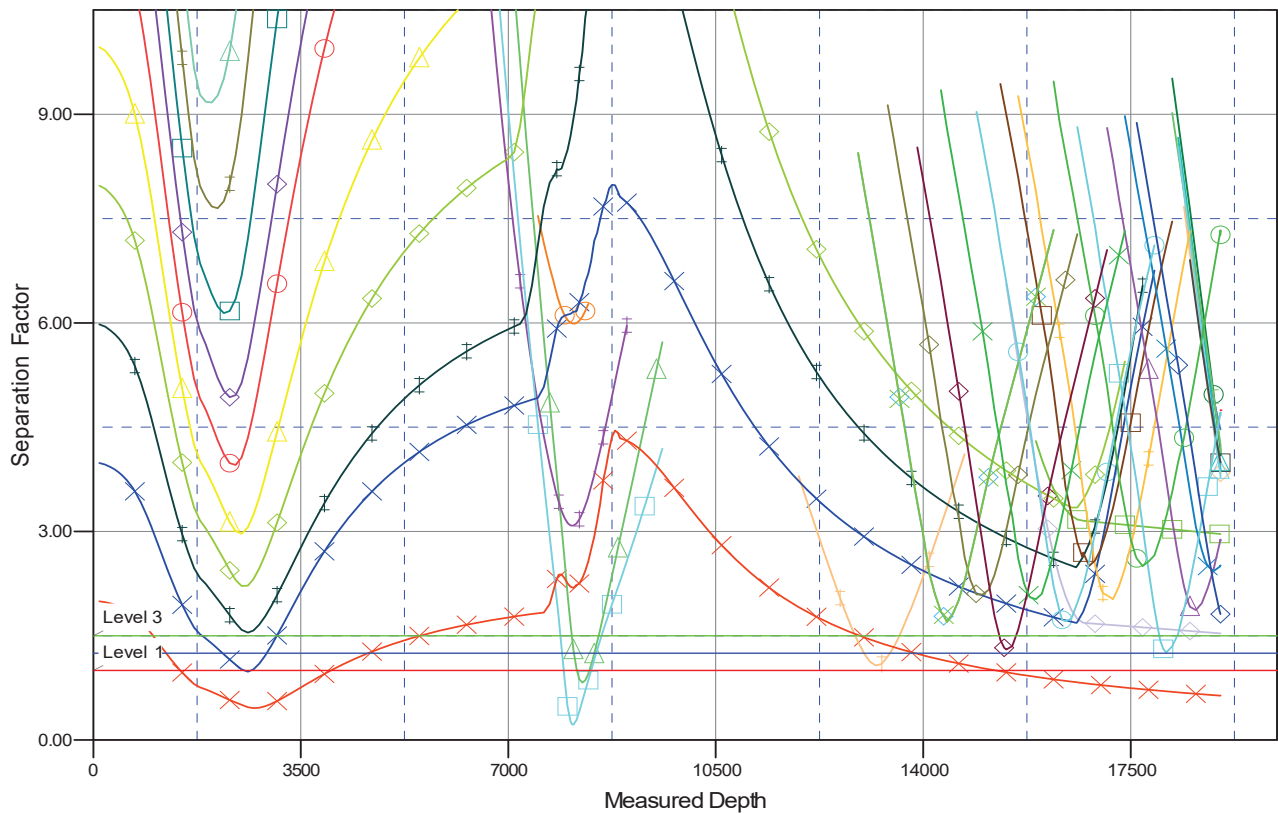
HP
Anticollision Summary Report

Company:	VERDAD RESOURCES	Local Co-ordinate Reference:	Well SONIC STAR 1101-16H
Project:	WATTENBERG FIELD	TVD Reference:	RKB = 20' @ 4902.00usft (RIG)
Reference Site:	8N-60W-11 SONIC STAR 1101 PAD	MD Reference:	RKB = 20' @ 4902.00usft (RIG)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	SONIC STAR 1101-16H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.28 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.16 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB = 20' @ 4902.00usft (RIG)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: SONIC STAR 1101-16H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.94°

Separation Factor Plot



LEGEND

BOOMSLANG FED 8-60 14A-13-182, Bison PR Well, Actual Baker Surveys V0	SONIC STAR 1101-09H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-5HN, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14A-13-183, Bison PR Well, Actual Baker Surveys V0	SONIC STAR 1101-15H, Wellbore #1, Design #1 V0	AF 2, Mallard Planned Well, Planned MWD Surveys V0
BOOMSLANG FED 8-60 14A-13-184, Bison PR Well, Actual Baker Surveys V0	SONIC STAR 1101-04H, Wellbore #1, Design #1 V0	SHULL FED 3-32 10HN, Mallard Planned Well, Planned Surveys V0
BOOMSLANG FED 8-60 14A-13-181, Bison Planned Well, Planned Bison MWD Surveys V0	SONIC STAR 1101-07H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-2HN, Mallard Planned Well, Planned Surveys V0
PEGGY 2501-16H, Wellbore #2, Design #1 V0	SONIC STAR 1101-08H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-8HN, Mallard Planned Well, Planned MWD Surveys V0
COLORADONATIONAL BANK #1, Shell P&A Well, No Surveys V0	SONIC STAR 1101-02H, Wellbore #1, Design #1 V0	AF 1, Mallard Planned Well, Planned Surveys V0
PTASNIK FED 3031 02H, Wellbore #1, Design #1 V0	SONIC STAR 1101-13H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-10HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 05H, Wellbore #1, Design #1 V0	SONIC STAR 1101-06H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-3HC, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 07H, Wellbore #1, Design #2 V0	SONIC STAR 1101-03H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-4HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 08H, Wellbore #1, Design #1 V0	SONIC STAR 1101-12H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-6HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 03H, Wellbore #1, Design #1 V0	SONIC STAR 1101-01H, Wellbore #1, Design #3 V0	ANDERSON FED 6-5-8HC, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 01H, Wellbore #1, Design #1 V0	SONIC STAR 1101-14H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-1HN, Mallard Planned Well, Planned Surveys V0
PTASNIK FED 3031 04H, Wellbore #1, Design #1 V0	SONIC STAR 1101-12H, Wellbore #1, Design #1 V0	ANDERSON FED 6-5-7HN, Mallard Planned Well, Planned MWD Surveys V0
PTASNIK FED 3031 06H, Wellbore #1, Design #1 V0	SONIC STAR 1101-05H, Wellbore #1, Design #1 V0	
	SONIC STAR 1101-11H, Wellbore #1, Design #1 V0	